

October Nor'easter After Action Review



City of Nashua, NH
2011-2012

The City of Nashua, NH initiated pre-planning on 10/27/2011 for the 2011 October Nor'easter. The Emergency Operations Center was active between 10/29/2011 and 11/4/2011. Debris management operations for the incident ended on 2/7/12 after the remaining brush was chipped and removed from the City. The emergency response team was composed of various community partners, including, Nashua Mayor's Office, Nashua Emergency Management, Nashua Fire Department, Nashua Police Department, Nashua Public Works, Nashua Public Health and Community Services, Nashua Information Technology, Nashua School District, Nashua Transit System, Nashua GIS, New Hampshire Red Cross, Southern New Hampshire Medical Center, St. Joseph Hospital, American Medical Response EMS, and Public Service of New Hampshire. The incident demonstrated the City of Nashua's capabilities of Planning, Communications, Risk Management, Community Preparedness and Participation, Intelligence and Information Sharing and Dissemination, On-Site Incident Management, Emergency Operations Center Management, Critical Resource Logistics and Distribution, Volunteer Management and Donations, Responder Safety and Health, Emergency Public Safety and Security Response, Environmental Health, Fire Incident Response Support, WMD and Hazardous Materials Response and Decontamination, Citizen Evacuation and Shelter-in-Place, Emergency Public Information and Warning, Emergency Triage and Pre-Hospital Treatment, Medical Surge, Medical Supplies Management and Distribution, Mass Care (Sheltering, Feeding and Related Services), Structural Damage Assessment, Restoration of Lifelines, and Economic and Community Recovery.

The City of Nashua Emergency Response agencies worked to coordinate multiple response activities simultaneously over a week period including the operation of a shelter with functional needs support, an extensive debris management project, and the continuity of government services. The Emergency Operations Center served as the coordination point of all activities throughout the response timeline. This historic storm served as a thorough test of our response procedures.

Nashua North High School was opened to the public for use as a regional shelter at 3pm on October 30th. Although many residences made their own arrangements to stay with friends or family, we had available accommodations for approximately 200 residents. The shelter had a maximum of 208 residents at throughout the week not including shelter staff. The school was used to provide a place to sleep and to serve meals to residents who had evacuated. Not only did the shelter have a extensive resident list, but also served as a place where Nashua residents could shower, get a hot meal, or plug in their electronic devices for a period of time while their power was out. 660 visitors were recorded throughout the week as just stopping by for a shower or to plug in. As sections of the City would have their power turned back on, residents would return to their homes.

Functional needs support at the shelter was experienced at a level not seen before at a Nashua Shelter. During the shelter activation, nearly half the residents required some level of functional needs support. The percentage of functional needs population represented shows that those requiring that type of support are starting to understand these capabilities can be provided in the shelter. Lessons learned from the shelter operation will help jumpstart a shelter planning project in the upcoming months.

An extensive media campaign was in operation throughout the duration of the incident. All response agencies provided info through the local media outlets, www.nashuanh.gov, and our Government Access TV stations. New mapping tools were established during the incident to provide Nashua residents with up to date information on closed roads and downed wires throughout the City. This was noted as an improvement to make during the Tropical Storm

Irene activation and was successfully implemented.

Nashua Public Works led what started as a snow removal operation and turned into one of the largest debris management operations in the City. Using lessons learned from the 2008 Ice Storm, the City took a proactive approach to coordinating the debris response. Residents were notified early in the incident to move their debris to the right-of-way to help expedite debris removal. Working with Nashua GIS, mapping based on a grid system was developed to help Public Works crews systematically clear debris from the roadway. Extensive documentation was completed to help support the potential FEMA Public Assistance reimbursement process in the future.

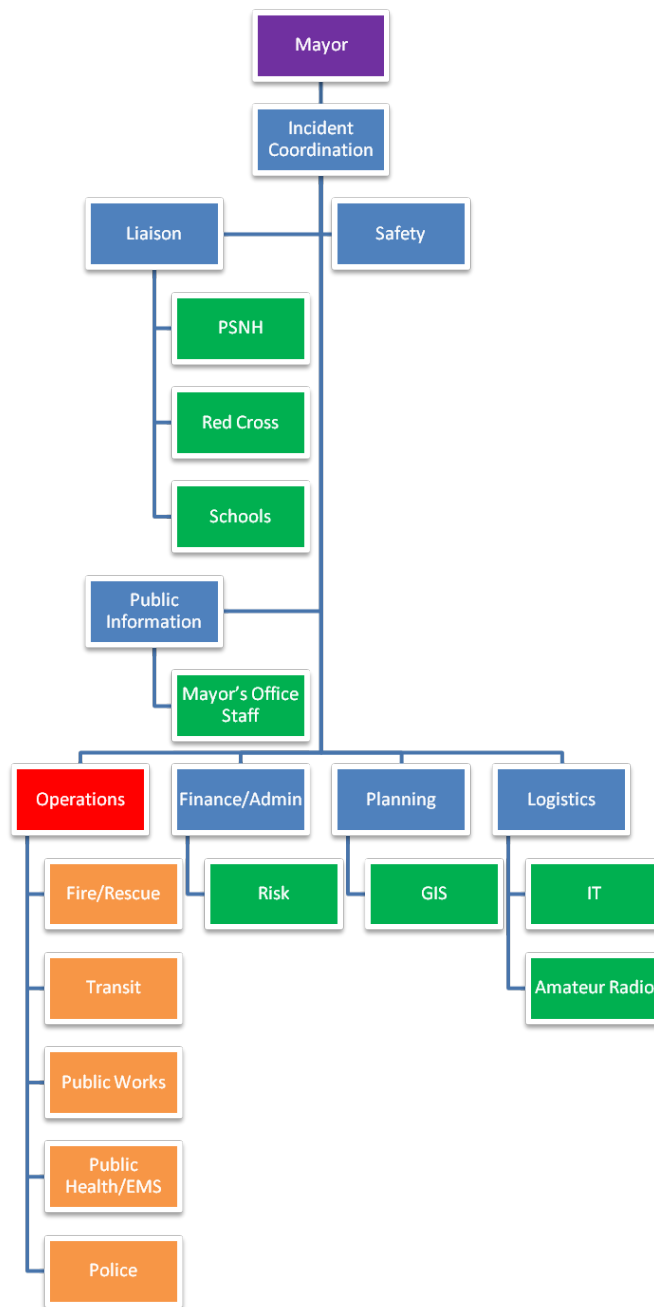
A storm this extensive was bound to cause major power outages across the region. PSNH has reported the storm to be the 3rd largest in its history. At its worst, 80 percent of Nashua was without power. Numerous critical infrastructure and key resources facilities were without power for extended periods including the Police HQ, two Fire Stations, the Waste Water Treatment Facility, three city communications towers, Streets Department HQ, Public Works HQ, Transit HQ, numerous schools, and Parks & Recreation HQ. The EOC worked with PSNH throughout the storm to designate priorities on power restoration to ensure the City could continue providing services to residents.

All Nashua response agencies worked together to manage the overall incident and provide for public safety. All recovery efforts are completed and efforts are underway to implement corrective actions in preparation for the next incident.

Objectives of the incident response included the following:

- Objective 1: Monitor situations conducive for severe winter weather.
- Objective 2: Notify citizens of protective measures and hazards through a variety of communications mediums.
- Objective 3: Identify partners and resources which can support the response.
- Objective 4: Reduce severe winter weather-related injuries and deaths.
- Objective 5: Maintain adequate police, fire, and EMS service.
- Objective 6: Ensure primary routes are cleared to wet pavement conditions.
- Objective 7: Keep parking lots of critical facilities plowed.
- Objective 8: Maintain public transit service.
- Objective 9: Conduct damage assessment.
- Objective 10: Clear debris from impacted areas.
- Objective 11: Maintain a shelter facility for impacted residents without power.
- Objective 12: Restore government services as power restoration and transportation network status allow.
- Objective 13: Remove debris from public right-of-way as recovery allows.

Organizational Chart



EOC Staffing

- Incident Coordinator
- PSNH Liaison
- Red Cross Liaison
- Schools Liaison
- Emergency Information Line Operator
- Communications (IT) Unit Leader
- GIS Unit Leader
- Fire Branch Director
- Public Works Branch Director
- Health & Medical Branch Director
- EMS Group Leader
- Transportation Branch Director
- Law Enforcement Branch Director

Response Organizations

- Nashua Mayor's Office
- Nashua Emergency Management
- Nashua Fire Department
- Nashua Police Department
- Nashua Public Works
- Nashua Public Health and Community Services
- Nashua Information Technology
- Nashua School District
- Nashua Transit System
- Nashua GIS
- New Hampshire Red Cross
- Southern New Hampshire Medical Center
- St. Joseph Hospital
- American Medical Response EMS
- Public Service of New Hampshire

The following actions were taken by the Nashua Office of Emergency Management:

- Submitted Resource Requests prior to and during the storm to New Hampshire Homeland Security & Emergency Management.
- Notification of response agencies of information supporting situational awareness.
- Maintained communications with the New Hampshire State Incident Planning and Operations Center.
- Maintained communication to the Red Cross in the event additional help and resources were needed at regional shelter.
- Coordinated the activation of the Emergency Operations Center with the Mayor.
- Attended all conference calls with New Hampshire Homeland Security & Emergency Management, Taunton, MA National Weather Service, and the State Department of Education.
- Coordinated meetings with Public Health and Public Works.
- Coordinated the activation of Nashua North Shelter with Mayor, New Hampshire Red Cross, Nashua Division of Public Health and Community Services, and Nashua School District
- Shelter Management requests from Nashua North by NH Red Cross.
- Developed content of Press Releases and information statements to City Residents.
- Provided assistance to NFD, NPD, NDPW, NDPHCS, and NSD as needed.
- Provided status updates to Mayor prior to and after storm.
- Supported efforts for power restoration and interfaced with PSNH.
- Provided updates to media as they called on current operations.
- Reviewed Nashua EOP (Emergency Operations Plan).
- Initiated FEMA Cost Recovery Efforts.
- Planned for operation through a multiple operational periods.
- Provided clean-up support and answered phone damage assessment messages to OEM office from City Residents.
- Worked to ensure resources were being dispatched properly between agencies.
- Ensured that information on incident was being logged through WebEOC.
- Demobilized emergency response operation.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Division of Public Health and Community Services with support from AMR EMS:

- Provided information on website and Facebook to assist residents/businesses on storm related issues.
- Division staff maintained situational awareness with local, regional, and state partners.
- Regional Public Health Partners provided with ongoing situational awareness.
- Coordinated with Regional Public Health support agencies (including hospitals, medical providers, long term care facilities, and agencies serving vulnerable/functional needs populations) to assess needs, including power status, facility status updates, determine needs, and ensure patients/consumers were aware of shelter availability status.

- Ensured equipment at warehouse was staged for deployment to necessary facilities.
- Contacted functional needs partner agencies to notify of shelter information as received.
- Contacted long term care and residential facility partners during EOC activation to provide contact information, offer support and assess generator status.
- Kept record of activities using WebEOC and ICS forms.
- Regional Public Health EP Special Needs cots were deployed to shelter prior to opening in case any resident needed one. During EOC activation, Public Health coordinated deployment of additional medical needs cots. Post event, Public Health coordinated recovery of cots with EMD supported. Public Health staff went to shelter to inspect cots and arranged for NFD and Transit staff to transport cots back to warehouse.
- Regional PH EP oxygen concentrators were deployed with the assistance of AMR to the shelter for O2 dependant residents who were unable to bring their O2 equipment. Concentrators were recovered during shelter closing by PHEP Coordinator.
- Coordinated medical staffing for shelter with support from medical partners, regional emergency fire/EMS, and Medical Reserve Corps volunteers.
- Provided representative at emergency operations center.
- Contacted health facilities around Nashua to assess potential storm-related needs.
- AMR Ambulance prepared all vehicles with fuel, fully supplied each vehicle with emergency materials and all available Oxygen bottles were filled.
- Alerted all employees prior to event asking for them to be prepared for activation and ensuring their families were prepared.
- Fielded calls at EOC from residents who were oxygen dependant and without/at risk of losing power. Coordinated plan with AMR for response in the event that the residents needed Oxygen tanks refilled.
- AMR ensured continuity of 911 ambulance service throughout the storm.
- Reviewed and wrote Press Releases and other information for website and emergency information line.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Division of Information Technology:

- Worked with Police IT to set up and test equipment at emergency operations center.
- Ensured up to date information was provided on incident via www.nashuanh.gov
- Provided information to public via Public Access, Government Access, and Educational Access television.
- Supported IT issues while EOC was operating.
- Provided technical support to GIS.
- Worked to restore City IT infrastructure after a failure during the storm.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Division of Public Works:

Before Storm

- All DPW personnel provided information on potential staffing for storm.

- Held coordination meeting with all department contacts and emergency management.
- Ensure plows and sanders were mounted on trucks.
- Ensured enough sand was available for duration of storm.
- Filled and distributed sand bags and sand.
- Removed temporary lightweight signage and equipment at construction sites.
- Coordinated with contractors on the stability of construction sites.
- Checked all chainsaws.
- Fueled and checked operation of all emergency generators.
- Filled gas and diesel tanks.
- Checked all inventory of all barricades, cones and road signs.
- Contacted local contractors for availability of heavy equipment such as chippers and snowplows.
- Contacted local tree contractors to ensure availability for debris removal.
- Brought in dispatcher to support calls for assistance and sandbags prior to storm.
- Checked equipment at all stormwater and sewer pump stations.
- Staged critical equipment in key areas for quick response.

During Storm

- Assisted police with closures of roads that were impassable.
- Plowed all routes not blocked by wires down.
- Responded to all down limbs and trees. Removed when feasible.
- Supported repair of traffic signal systems
- Installed temporary traffic devices at intersections without power
- Staffed Emergency Information Line at EOC position to answer calls for assistance from City residents.
- Supported wastewater operations.
- Planned for operation through multiple operational periods.
- Logged information on WebEOC.
- Provided backup power to pump stations without power.
- Developed debris management plan to pick up debris from public right of way.

After Storm

- Provided area at landfill for residents to discard debris from flooded areas.
- Removed debris using DPW personnel and contractors.
- Checked trees and root systems that have been compromised from the storm.
- Continued to pick up and process brush with multiple crews.
- Servicing all City fleet that was used to support response missions.
- Inspecting inventory of all cones, barricades and signs that may have been damaged.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Police Department:

- Answered calls of assistance for wires down and wind and tree damage.
- Provided information and field reports to Emergency Operations Center.

- Conducted business as usual for complaints and other police activities.
- Provided representatives at emergency operations center.
- Community Policing provided distribution of press releases to neighborhood watch groups.
- Planned for operation through multiple operational periods.
- Police IT provided logistical support in the activation of the EOC.
- Police IT supported calls for trouble in the EOC and supported IT issues with network equipment.
- Prepared to provide assistance in evacuation of residents if necessary.
- Provided traffic control and multiple intersections across City without working traffic lights.
- Provided police detail to shelter at Nashua North.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Transit System:

- Provided assistance to residences without transportation to shelter.
- Activated personnel to staff van and bus for transports to shelter for evacuation purposes.
- Provided representative at Emergency Operations Center.
- Staffed dispatch to help coordinate calls for transportation assistance.
- Transported Public Health trailers to and from the Nashua North Shelter.
- Transported generator to assist
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Fire Department:

- Station Generators were tested to ensure operation.
- Chainsaws were added to fire engines at single engine fire houses.
- Command Staff was briefed on current operations pre and post event.
- Provided information to Local and State Emergency Operations Center and logged information via WebEOC.
- Provided representatives at the Emergency Operations Center.
- Added dispatchers during high volume 911 call time to help field calls and provide assistance.
- Planned for operation through multiple operational periods.
- Activated Fire Alarm Superintendent to help coordinate Fire Alarm System repairs due to tree damage.
- Handled wires down calls as well as normal fire/rescue calls.
- Supported transportation of Public Health trailers to and from Nashua North shelter.
- Provided incident command capabilities to multiple fires and a gas main break in the City.
- Provide mutual support for EMS missions.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua School District:

- Provided access to Nashua North High School for use as a regional shelter.
- Coordinated with Emergency Management and the Red Cross to establish plan for opening shelter.
- Scheduled shifts of food service and janitorial staff to support shelter throughout the duration of use.
- Maintained open shelter from 3pm Sunday through 11am Friday.
- Provided food to shelter residents and shelter staff for breakfast, lunch, and dinner each day.
- Responded to calls for maintenance at all schools damaged by storm.
- Participated in State Department of Education conference calls with EMD
- Transportation staff and Superintendent coordinated clearance of school routes for buses and walking students.
- Coordinated opening of schools while maintaining shelter operations.
- Provided equipment to Public Works for use in emergency response.
- Logged information and updates on WebEOC on status of shelter facilities and power restorations to schools.
- Kept account of all costs for FEMA recovery.

The following actions were taken by the Nashua Geographic Information Systems Department:

- Plotted locations of active calls on Pictometry map
- Exported active calls to KML
- Provided KML file to webmaster for display on City home page
- Plotted active calls in ArcGIS
- Exported Map and Excel spreadsheet to inform PSNH of active downed wire locations
- Provided mapping support to emergency operations center
- Provided locations of active calls to emergency operations center and city officials
- Troubleshooted technical issues with Information Technology
- Updated all locations as information was provided to emergency operations center.

The following actions were taken by the Nashua Mayor's Office:

- Provided a connection to the public by answering the Nashua Emergency Info line while not being staffed at EOC.
- Answered public inquiries from citizens requesting information.
- Communications worked with Emergency Management to develop information to be sent out for City Employees on emergency preparedness.
- Communications supported development of press releases with Emergency Management.
- Maintained situational awareness throughout the storm.
- Answered inquiries from public on shelters and storm information.

- Reviewed voice messages from residents on damage assessments to Emergency Info line after storm.

TOTAL NUMBER OF FIRE CALLS: 450

TOTAL NUMBER OF POLICE CALLS: 745

Preliminary damage on **PUBLIC PROPERTY**:

Dozens of trees down

Damage to multiple City parks including fences and backstops

Hillsborough County was not approved for FEMA Public Assistance with the exception of Category A and B.

Preliminary damage on **PRIVATE PROPERTY**:

30 Homes Inspected by Nashua Building Inspectors.

Hillsborough County was not approved for FEMA Individual Assistance

Lessons Learned

- **Experience** – Because the City has been involved in major winter storms in the past, much of the lessons learned from debris clearance and removal were resolved. Much of the documentation and planning for a major debris removal operation was developed during the Ice Storm of 2008 and reutilized during this storm. Fire, Police, and EMS is experienced at responding to emergencies in major snow events, and didn't experience major delays in responding during this event.
- **Partnerships** – Because of meetings like the Local Emergency Planning Committee and the partnerships established between agencies by previous emergency management directors, all response agencies were familiar with their responsibilities and who the various point of contacts would be for various issues during the event.
- **Activation of Shelter** – Lessons learned after Tropical Storm Irene allowed for a much more efficient shelter activation. All agencies were aware of their responsibilities and emergency management made an effort to ensure all required resources were in place before the shelter opened.
- **Documentation** – Agencies started documentation of storm costs immediately during the incident response based on lessons learned from Tropical Storm Irene. The City of Nashua had a better idea of costs to date when the Preliminary Damage Assessment was done.
- **Foresight** – The planning that took place prior to the incident made the escalation of the incident coordination go much smoother than it could have been. While many were expecting this incident to be an average snowstorm, plans were made to ensure adequate Public Works staffing, and that volunteers would be available for a potential shelter activation.
- **Flexibility** – As the incident scaled into a much larger operation, agencies were flexible with staffing and resources to get the job done.
- **Normal Operations to EOC Transition** – There were a limited number of management personnel available initially to staff an EOC as they were all managing their individual organizations. It is difficult to transition from individual operations to a overall operation at an Emergency Operations Center
- **Citizen Preparedness** – The October storm strengthens the reason for a strong public outreach program for disaster preparedness. Many residents did not heed warnings in press releases and media statements to prepare for the storm with adequate fuel and food. A program to educate citizens on how to develop an emergency preparedness kit and be prepared for long term power outages should be implemented.
- **Long Term Incident Planning** – Based on estimates and projections on the 2008 Ice Storm, response agencies were able to determine actions that were critical at various points during the incident. The emergency operations plan should be reviewed and agencies should have checklists of actions at various points prior, during, and after the incident. Briefings or conference calls are important to discuss actions for the next operational period.
- **Information Sharing** – It is critical that the information from citizens and other

organizations that comes in through numerous portals throughout the incident is shared in a unified manner. Wire and tree down information should be unified on a master online tree and wire list. All organizations need to determine what information they need to do their job and who can provide it elsewhere in the city.

- **Staffing** – What critical agencies need to be represented in the EOC during various types of incidents and at what times in the incident they need to be there should be reviewed by the City. After the first 24 hours, the fire and police involvement in the EOC diminished and it became primarily Public Works and Medical Needs/Sheltering incidents. The City should identify more individuals trained at staffing Incident Command System (ICS) General and Command Staff positions (Operations, Logistics, Finance, Planning, Public Information, etc.).
- **Technology/Mechanical Issues** – Many information technology and mechanical systems are critical to the incident response. Agencies should take immediate attention to these systems that encountered issues during the October storm and determine if they are adequate and/or reliable for emergency response.
- **Continuity of Operations** – Planning for continuing government operations during an incident needs to be prioritized. A close look should be taken at what types of services and events should be canceled and what are necessary for government operations. “On Call” lists of necessary personnel should be developed for ALL divisions and departments. All key personnel should have trained replacements as no individual can work without a rest period.

Document compiled with information from all participating agencies by:

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